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Preface

These are the proceedings of FOCLASA'07, the 6^{th} International Workshop on the Foundations of Coordination Languages and Software Architectures, that was held in Lisbon (Portugal) on September 8, 2007. FOCLASA'07 was a satellite of the 18th International Conference on Concurrency Theory, CONCUR 2007. The workshop aimed at providing a venue where researchers and practitioners could meet, exchange ideas and issues, identify some of the key and fundamental issues related to coordination languages and software architectures, and explore together and disseminate solutions. Indeed, a number of hot research topics are currently sharing the common problem of combining concurrent, distributed, mobile and heterogenous components, trying to harness the intrinsic complexity of the resulting systems.

Many nowaday computing paradigms, like grid computing, Web services, peer-to-peer systems, multi-agent systems, component-based systems, autonomic computing, and self-organisation, share common problems, which can be tackled by coordination languages and software architectures, so as to address issues such as improving software productivity, enhancing maintainability, advocating modularity, promoting reusability, and leading to systems more tractable and more amenable to verification and global analysis. The workshop website can be found at:

http://foclasa.lcc.uma.es

Seven high-quality research articles are included in these postworkshop proceedings. The article *"A Service-Oriented Model for Embedded Peer-to-Peer Systems"* by Antonio Brogi *et al.* introduces a core calculus harnessing the most relevant abstractions and concepts of Peer-to-Peer systems, paving the way towards the development of verification tools for applications developed on top of this novel paradigm. The article *"Modelling of Service-Oriented Architectures with UML"* by Marcos López-Sanz *et al.* focuses on Service-Oriented Architectures instead, and introduces a development methodology based on the Model-Driven Architecture proposal, along with a UML profile. The article *"Comparing Three Coordination Models: Reo, ARC, and RRD"* by Carolyn Talcott *et al.* considers representatives of three different kinds of coordination models (Reo, ARC, and RRD), and compares them attending to different dimensions, and also by means of a Car Factory

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case study. Finally, the article points out requirements for a common foundational model. The article *"Coordination Models Orc and Reo Compared"* by José Proença and Dave Clarke takes a similar stance, and compares Reo and Orc by providing and analysing the two embeddings of one model into the other. The article *"Connector Rewriting with High-Level Replacement Systems"* by Christian Koehler *et al.* focuses on the Reo coordination model, and shows how the theory of High-Level Replacement Systems can be used to fuitfully model dynamic connector reconfiguration. The article *"Prototyping A&A* ReSpecT *in* Maude*"* by Matteo Casadei *et al.* takes as a reference the ReSpecT language for programming tuple centres in the TuCSoN infrastructure, and provides a description of its syntax and semantics using the Maude term rewriting system, resulting in a prototype implementation suitable for model-checking and other kinds of formal analysis. Finally, the article *"Prototyping Concurrent Systems with Agents and Artifacts: Framework and Core Calculus"* by Alessandro Ricci *et al.* introduces a core calculus for the agents and artifacts meta-model, providing an interesting mix of object-oriented and concurrency features.

Program Committee

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